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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,993

07/13/2006

Hiromi Yokota

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EXAMINER

FOGARTY, CAITLIN ANNE

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

06/30/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/585,993	Applicant(s) YOKOTA ET AL.	
	Examiner CAITLIN FOGARTY	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/13/2006, 5/31/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1 – 5 are pending and presented for this examination.

Information Disclosure Statement

2. The information disclosure statements (IDS) were submitted on July 13, 2006 and May 31, 2007. These submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claim 5, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2 355 016 A from the IDS (hereafter GB '016).

With respect to instant claim 1, p. 3 lines 4 – 17 and p. 9 line 20 – p. 10 line 6 of GB '016 teach a Pb-free copper-based sintered alloy with a composition of 1 - 20 mass% Bi, 0.1 - 10 vol% of hard particles having a particle grain size (diameter) from 1 - 45 μm , and the balance consisting of Cu and unavoidable impurities where the Bi phase is dispersed in the Cu matrix. These compositions and the particle diameter overlap with the recited composition and particle diameter. Furthermore, p. 4 lines 3 - 15 of GB '016 teach that Bi is prevented to flow out from its initial position through coexisting hard particles. Therefore, the Bi phase has a smaller average particle diameter than that of the hard matter particles.

In regards to instant claim 2, p. 3 lines 4 – 17 , p. 5 line 26 – p. 6 line 1, and p. 9 line 20 – p. 10 line 6 of GB '016 disclose a Pb-free copper-based sintered alloy with a composition of 1 – 20 mass% Bi, 0.5 – 15 mass% Sn, 0.1 - 10 vol% of hard particles having a particle grain size (diameter) from 1 - 45 μm , and the balance consisting of Cu and unavoidable impurities where the Bi phase is dispersed in the Cu matrix.

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Furthermore, GB '016 also teaches that the sintered alloy may contain not more than 40 mass% of one or more elements of Fe, Al, Zn, Mn, Co, Ni, Si, and P in an amount or a total amount (p. 5 line 26 – p. 6 line 1). These compositions and the particle diameter overlap with the recited composition and particle diameter. Furthermore, p. 4 lines 3 - 15 of GB '016 teach that Bi is prevented to flow out from its initial position through coexisting hard particles. Therefore, the Bi phase has a smaller average particle diameter than that of the hard matter particles.

Regarding instant claim 3, p. 3 lines 4 – 17 and p. 9 line 20 – p. 10 line 6 of GB '016 teach a Pb-free copper-based sintered alloy with a composition of 1 - 20 mass% Bi, 0.1 - 10 vol% of hard particles having a particle grain size (diameter) from 1 - 45 μm , and the balance consisting of Cu and unavoidable impurities. These compositions and the particle diameter overlap with the recited composition and particle diameter.

GB '016 differs from instant claim 3 because it does not specifically teach that the hard matter particles have 50% or less of a contact length ratio with the Bi phase based on the total circumferential length of the hard matter, which is in contact with the Bi phase, are present in a ratio of 70% or more based on the entire number of the hard matter particles. However, since the sintered alloy of GB '016 has an overlapping composition and is made using a similar method (p. 9 line 5 - p. 10 line 6) as the sintered alloy of the present invention, it would be expected that the sintered alloy of GB '016 would have an overlapping contact length ratio and hard matter particle ratio.

With respect to instant claim 4, p. 3 lines 4 – 17 , p. 5 line 26 – p. 6 line 1, and p. 9 line 20 – p. 10 line 6 of GB '016 disclose a Pb-free copper-based sintered alloy with a

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composition of 1 – 20 mass% Bi, 0.5 – 15 mass% Sn, 0.1 - 10 vol% of hard particles having a particle grain size (diameter) from 1 - 45 μm , and the balance consisting of Cu and unavoidable impurities. Furthermore, GB '016 also teaches that the sintered alloy may contain not more than 40 mass% of one of more elements of Fe, Al, Zn, Mn, Co, Ni, Si, and P in an amount or a total amount (p. 5 line 26 – p. 6 line 1). These compositions and the particle diameter overlap with the recited composition and particle diameter.

GB '016 differs from instant claim 4 because it does not specifically teach that the hard matter particles have 50% or less of a contact length ratio with the Bi phase based on the total circumferential length of the hard matter, which is in contact with the Bi phase, are present in a ratio of 70% or more based on the entire number of the hard matter particles. However, since the sintered alloy of GB '016 has an overlapping composition and is made using a similar method (p. 9 line 5 - p. 10 line 6) as the sintered alloy of the present invention, it would be expected that the sintered alloy of GB '016 would have an overlapping contact length ratio and hard matter particle ratio.

Since the claimed compositional ranges of instant claims 1 – 4 either overlap or are within the ranges disclosed by GB '016, a prima facie case of obviousness exists. See MPEP 2144.05. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed sintered alloy composition from the sintered alloy composition disclosed by GB '016 because GB '016 teaches the same utility (i.e. sliding material) in the whole disclosed range.

In regards to instant claim 5, p. 7 line 19 – p. 8 line 14 of GB '016 discloses that the hard matter particles may be an Fe compound such as an Fe-B system.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1 – 5 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1 – 4 of

copending Application No. 11/148,186. Although the conflicting claims are not identical,

they are not patentably distinct from each other because the claimed sintered alloy

composition and hard matter particle size and elements are overlapped by the claims of

the copending application. It would have been obvious to one of ordinary skill in the art

at the time the invention was made to select the claimed sintered alloy composition from

the bearing composition disclosed by 11/148,186 because 11/148,186 teaches the

same utility (i.e. sliding material) in the whole disclosed range.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAITLIN FOGARTY whose telephone number is (571)270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

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